

Kolak, Shari

From: Kolak, Shari
Sent: Thursday, July 25, 2019 1:27 PM
To: Ken.Kaup@spinps.com
Subject: East Troy ROD Figures
Attachments: Figures 1-19.pdf

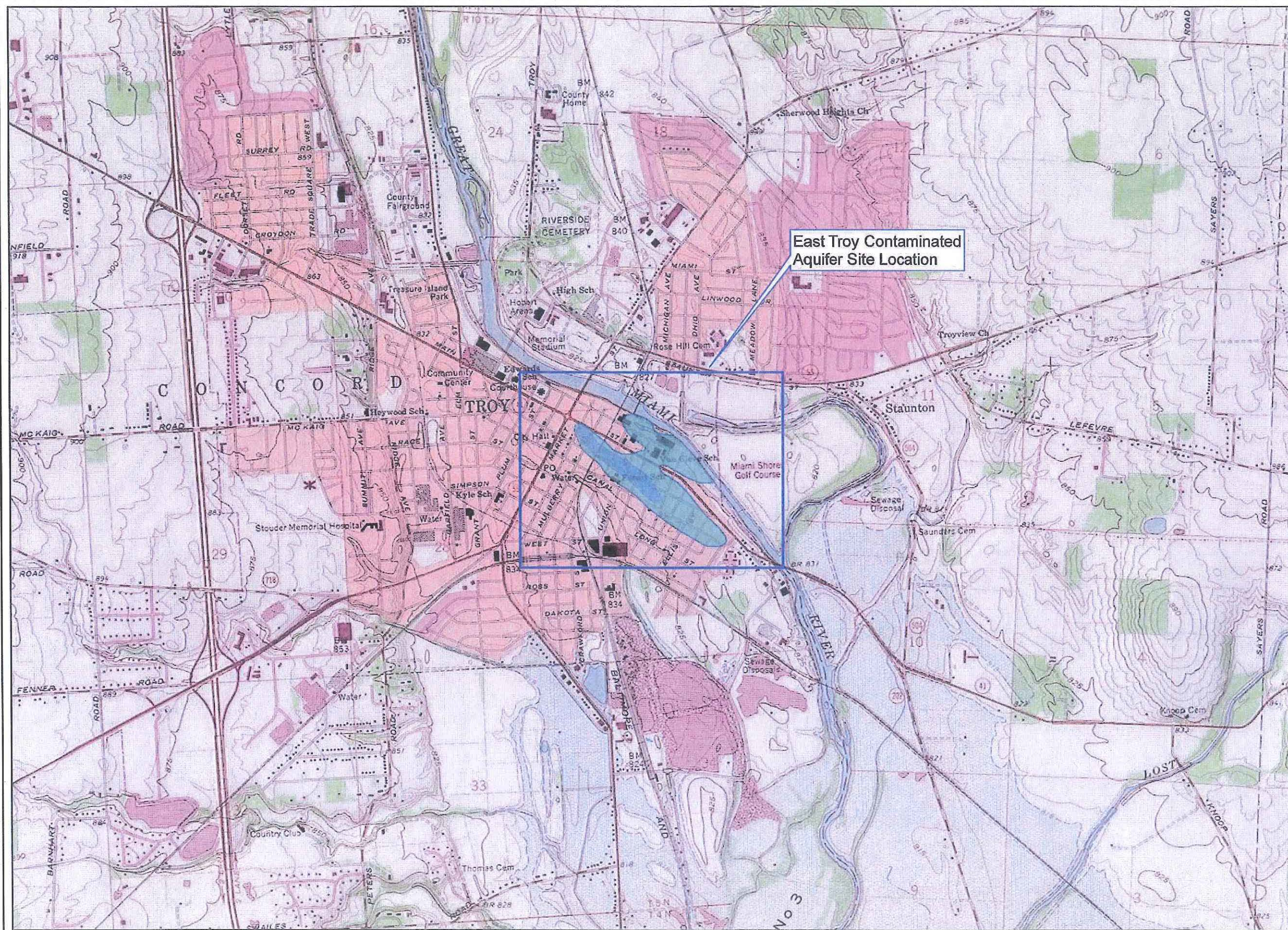
Categories: In Records Center

Mr. Kaup,

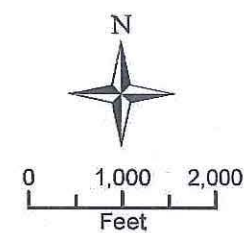
I see the web link messed up so here it is
again.... <https://cumulis.epa.gov/supercpad/cursites/csitinfo.cfm?id=0507962>

Attached are the figures to the Record of Decision. The area to be remediated at Spinnaker is shown on Figure 14. Call if you have questions. Shari

Shari Kolak
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Superfund Division, RRS #1
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- Legend**
- Site Location Outline
 - Total Chlorinated VOCs >100 µg/L (ppb) Plume Area
 - Total Chlorinated VOCs <100 µg/L (ppb) Plume Area



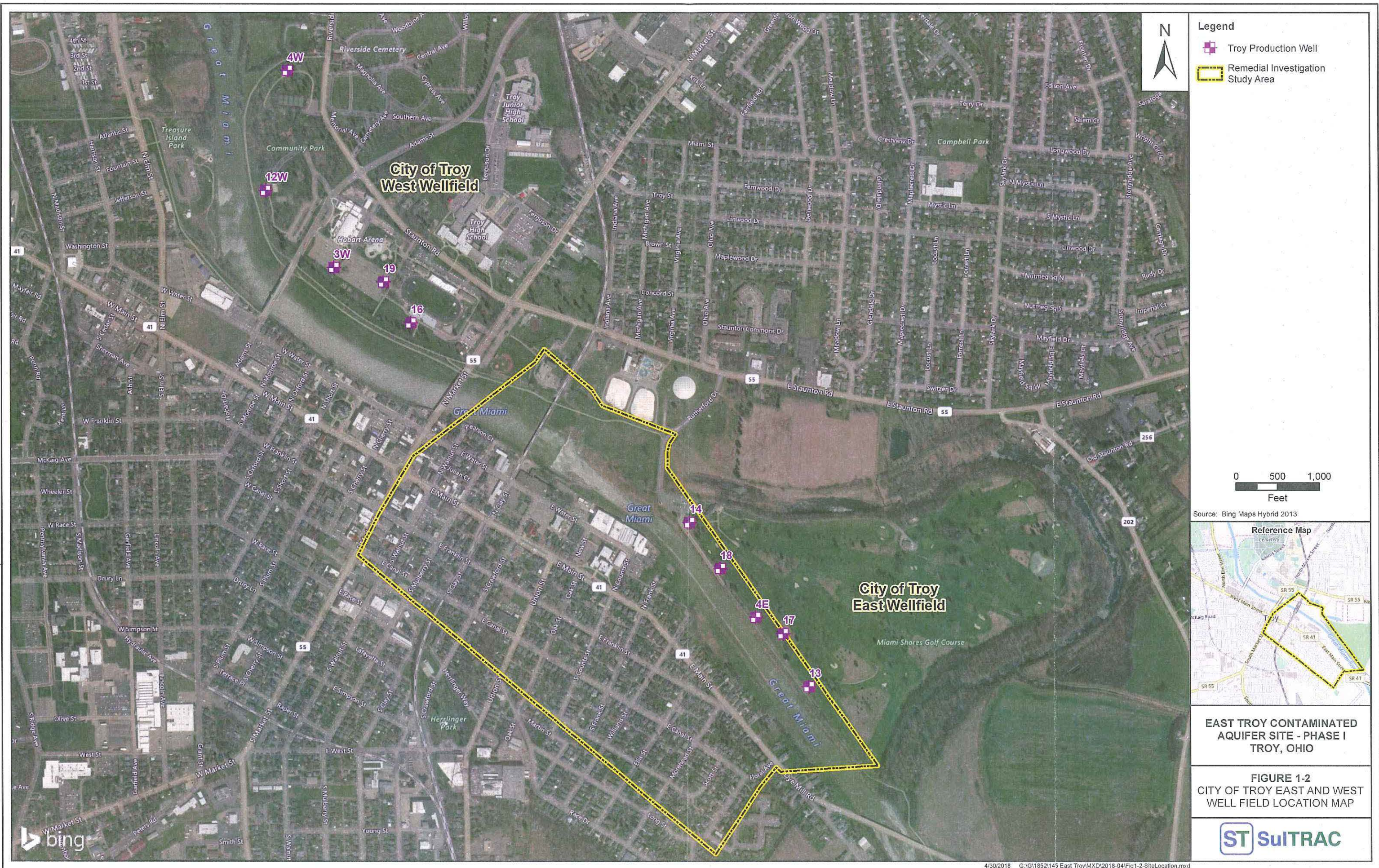
SOURCE:
Modified from USGS, Troy, OH 1984 Quadrangle.

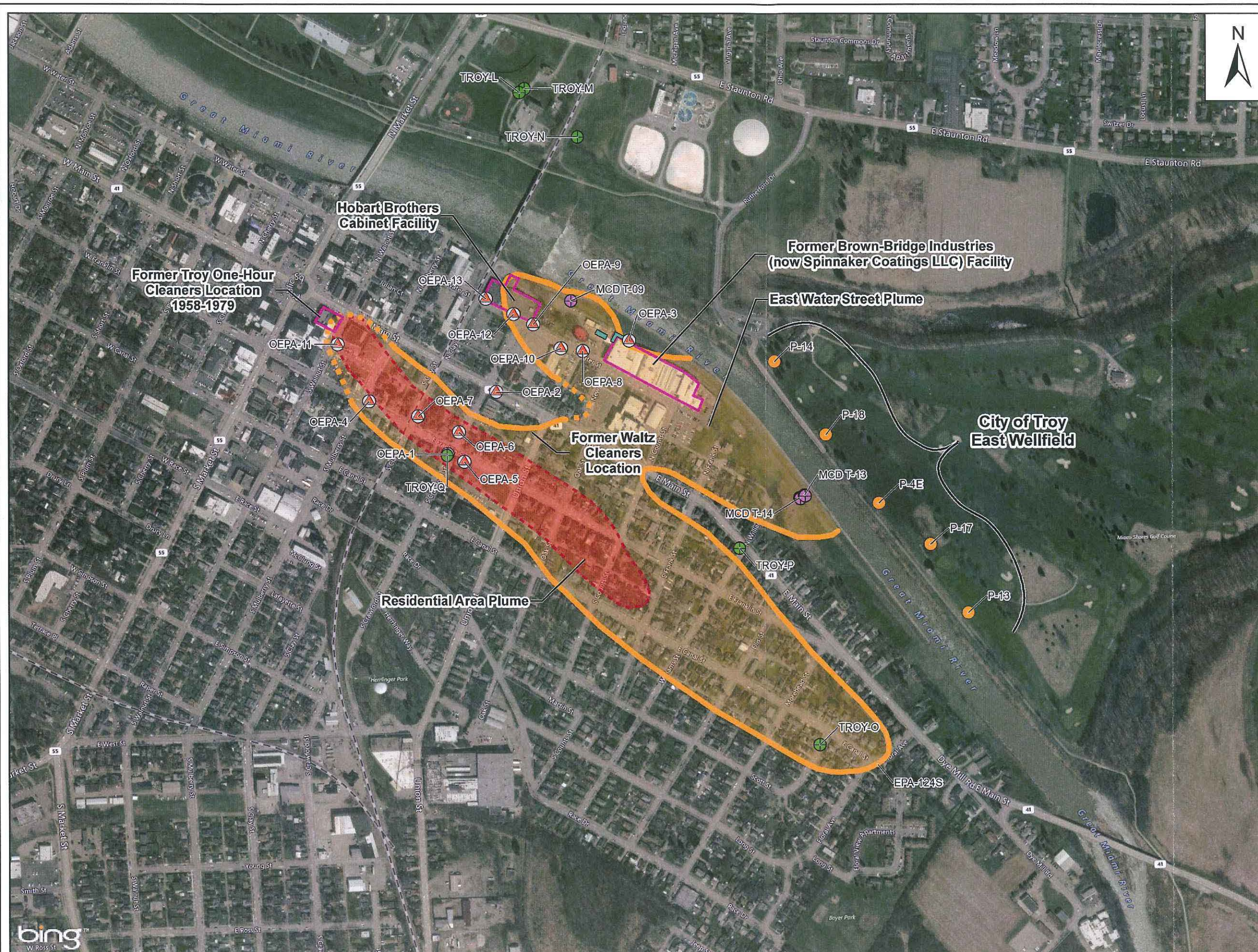


**EAST TROY CONTAMINATED
AQUIFER SITE
TROY, OHIO**

FIGURE 1
SITE LOCATION MAP







Legend

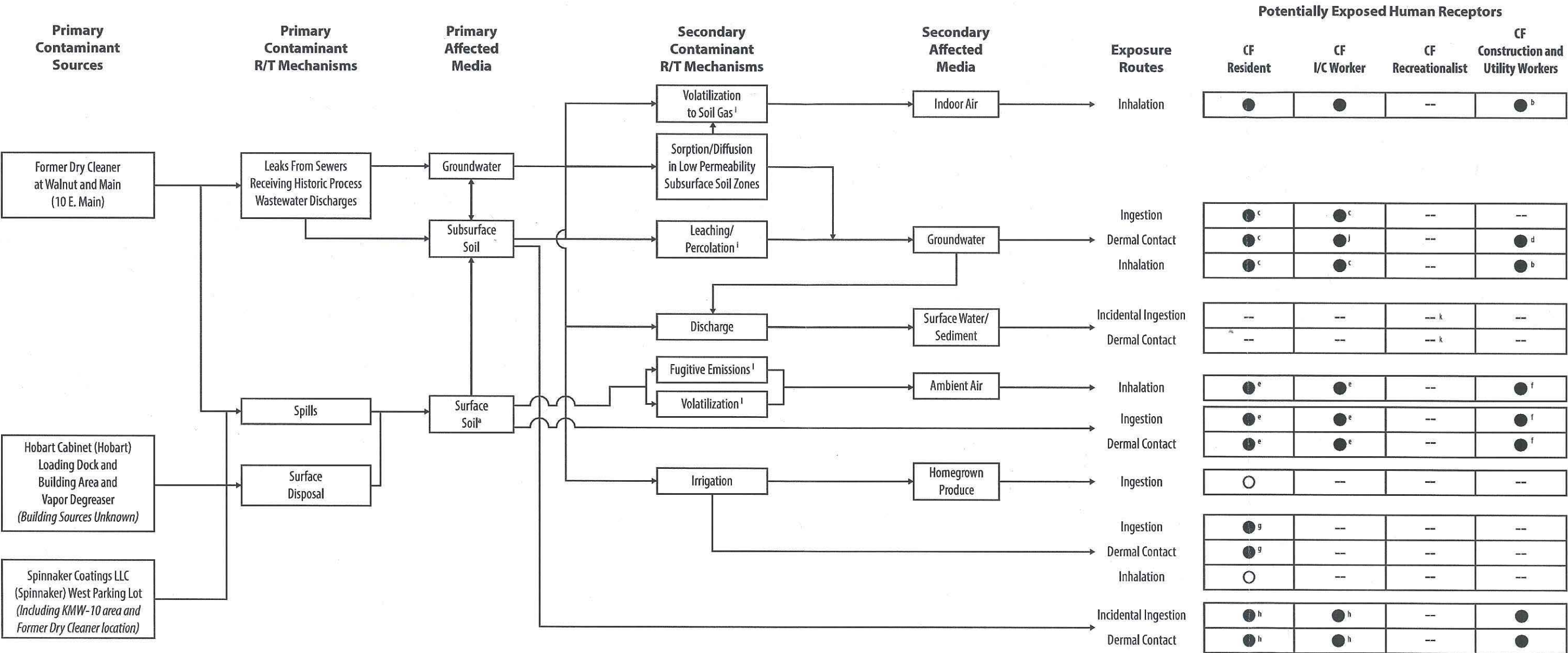
- Ohio EPA Well
- Troy Monitoring Well
- MCD Well
- Troy Production Well
- Approximate Areas of 1995 Soil Excavations
- Feature Boundary
- Total Chlorinated VOCs >100 µg/L (ppb) Plume Area
- Total Chlorinated VOCs <100 µg/L (ppb) Plume Area

Notes:
MCD - Miami Conservation District
OEPA - Ohio Environmental Protection Agency
P - City of Troy Supply Well
ppb - Parts per billion
RI - Remedial Investigation
S - Shallow
T - Miami Conservancy District Monitoring Well
VOC - Volatile Organic Compound
µg/L - Micrograms per liter

EAST TROY CONTAMINATED
AQUIFER SITE
TROY, OHIO

FIGURE 2
SITE FEATURES





Notes:

- R/T = Release/transport
- = Potentially complete, but insignificant exposure pathway - will not be retained for quantitative analysis
- = Potentially complete exposure pathway - retain for quantitative analysis
- = Incomplete exposure pathway; will not be retained.
- bgs = Below ground surface
- C = Current
- F = Future
- I/C = Industrial - Commercial



Legend

- Phase I Soil Sample (May-June 2012)
- Phase II Soil Sample (February 2013)

Soil sample concentrations in micrograms per kilogram (µg/kg).

Sampling locations shown without associated analytical results indicate that samples were collected; however, all results were below site screening levels.

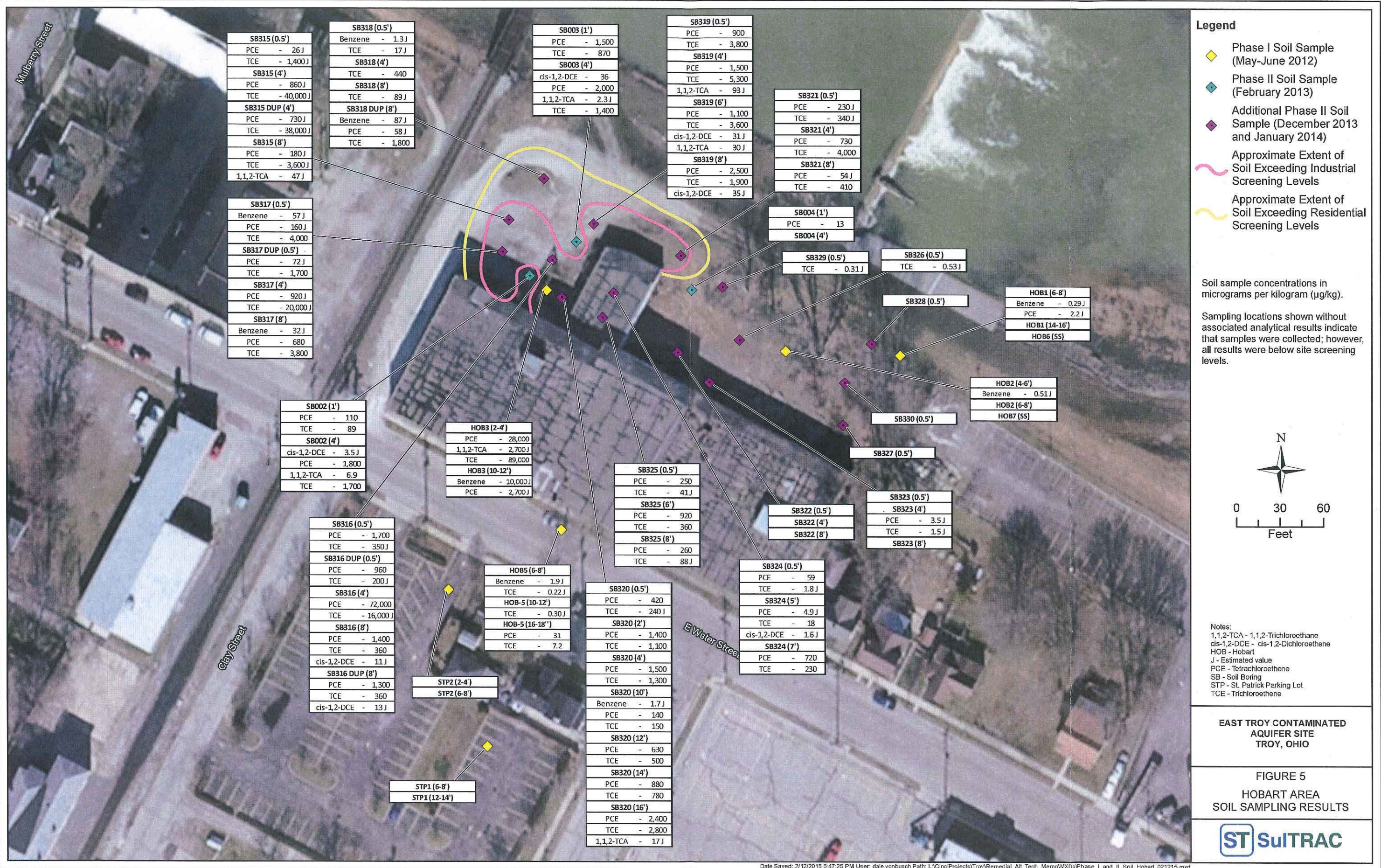
0 200 400 Feet

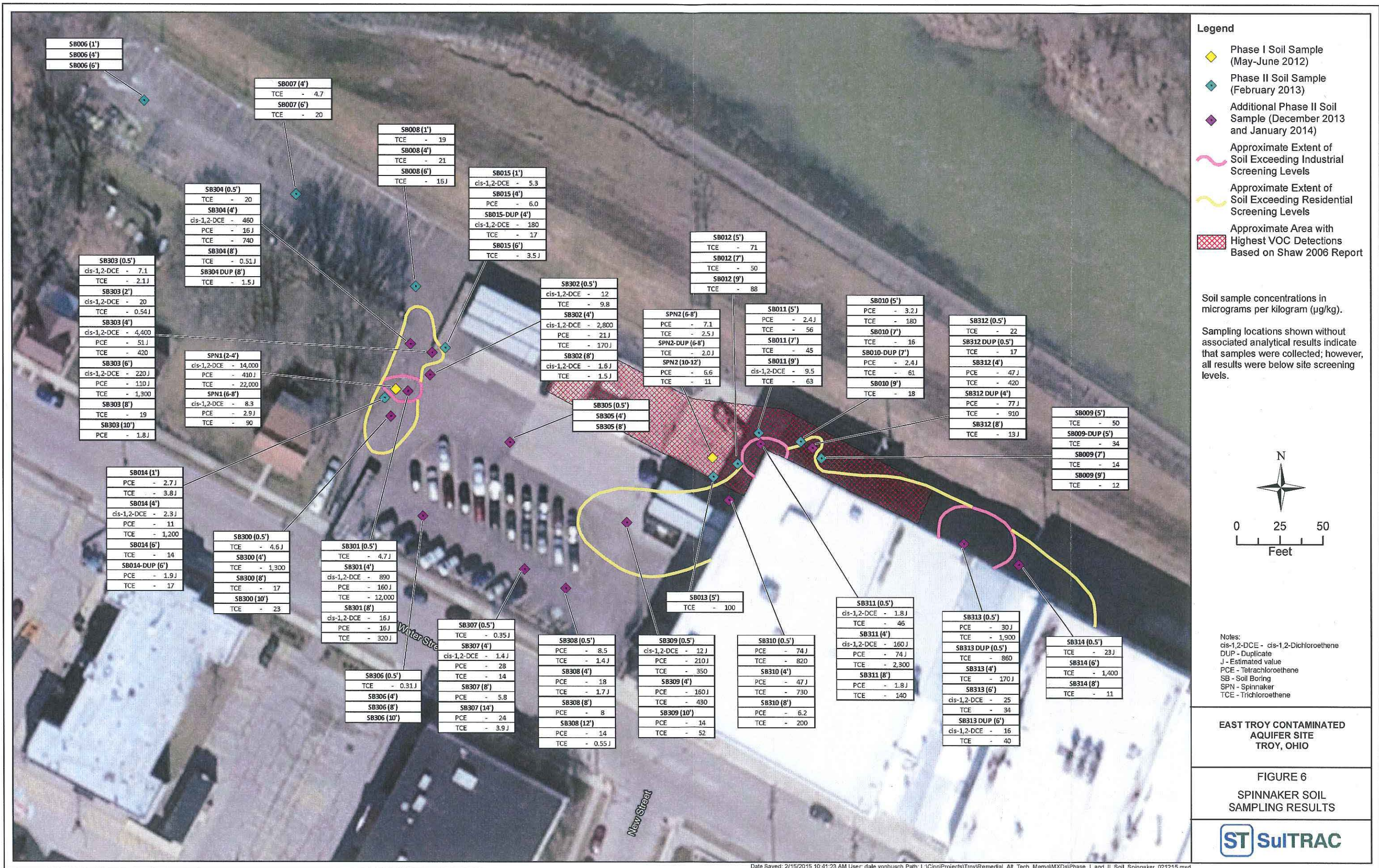
Notes:
CHE - Cherry Street
CLY - Clay Street
CRA - Crawford Street
FRA - Franklin Street
HER - Herringer Way
J - Estimated value
MAI - Main Street
MUL - Mulberry Street
PCE - Tetrachloroethene
RAC - Race Street
SB - Soil Boring
TCE - Trichloroethene
TPD - Troy Police Department

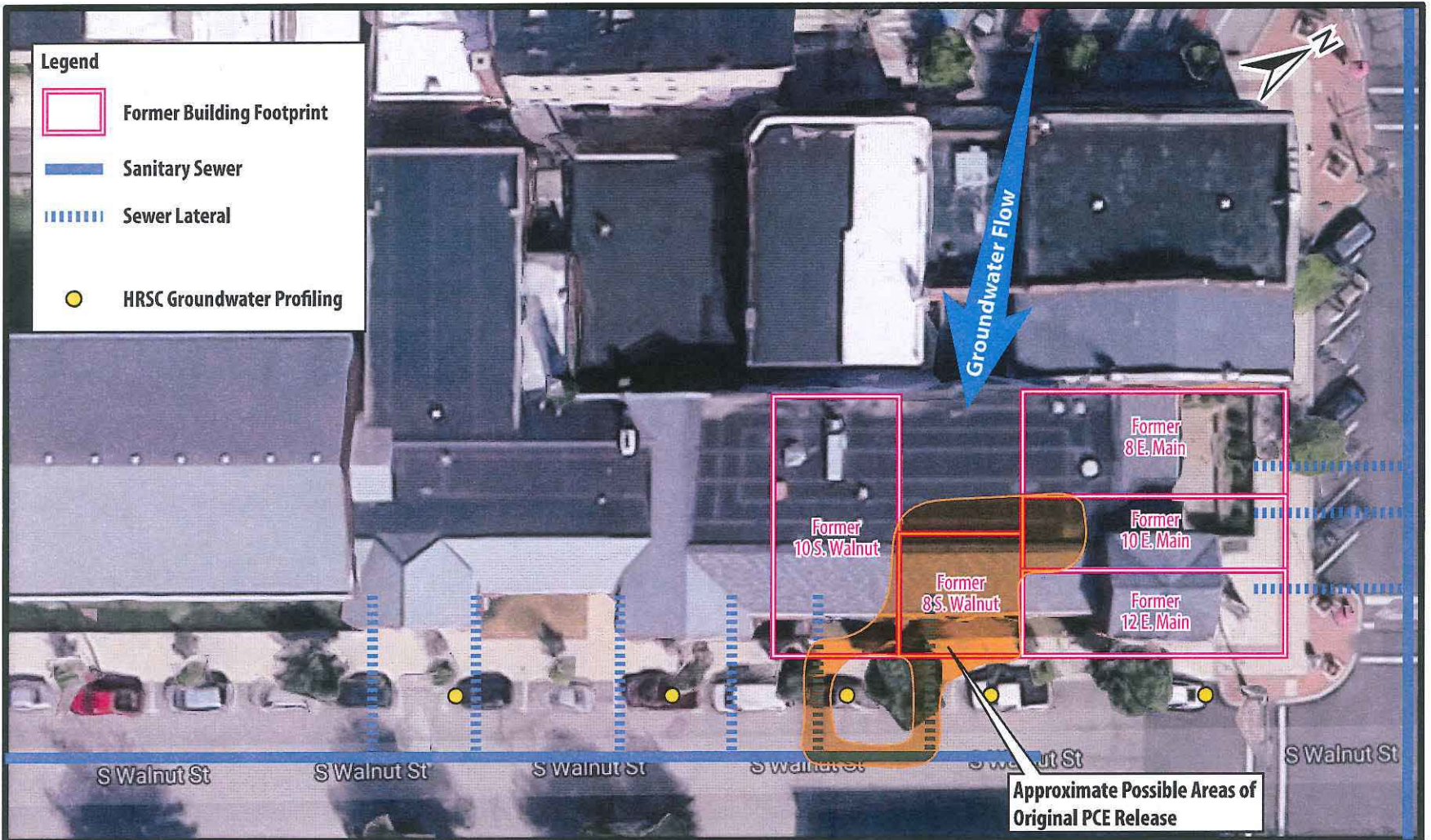
EAST TROY CONTAMINATED
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FIGURE 4
RESIDENTIAL AREA
SOIL SAMPLING RESULTS

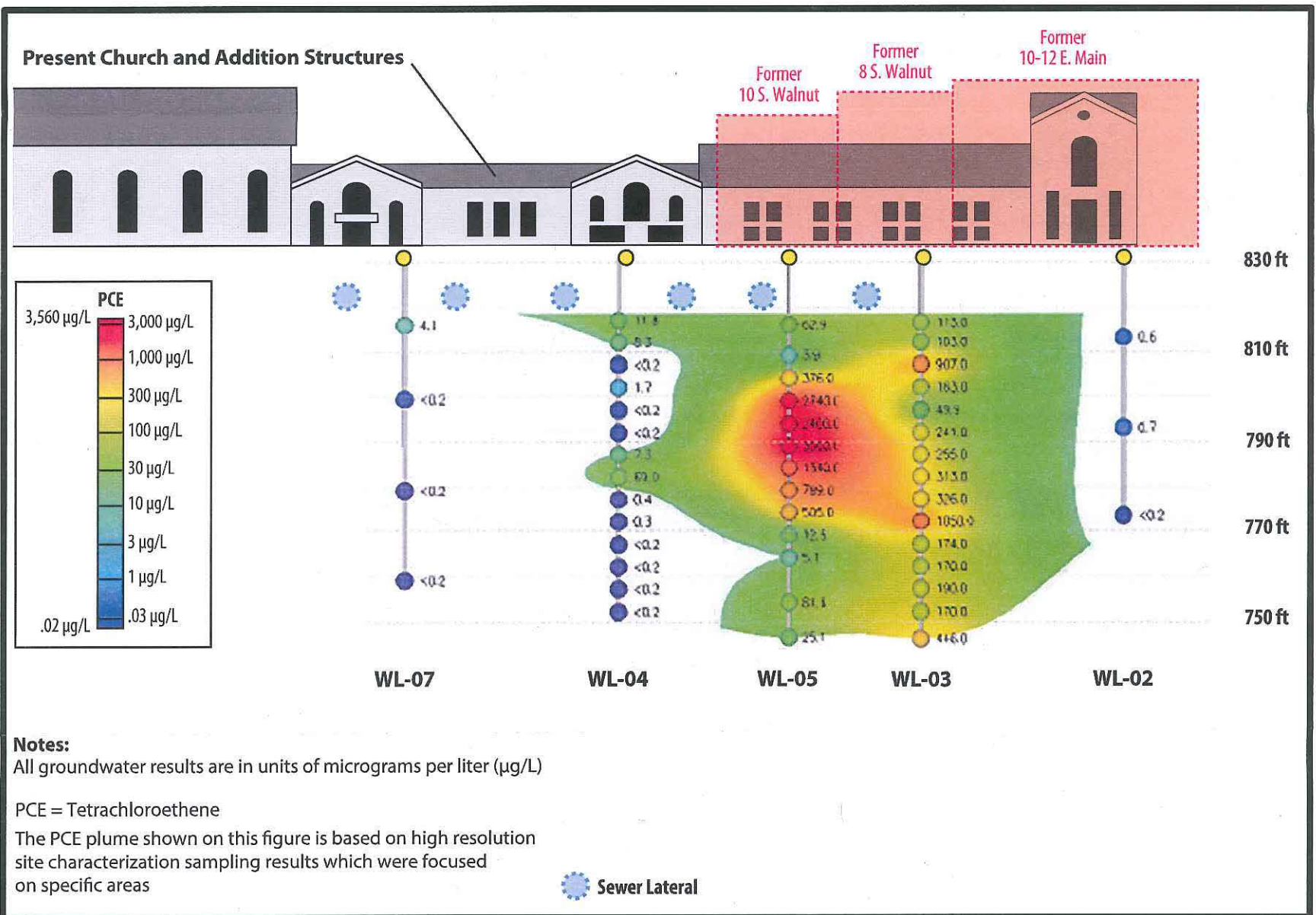
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Plan view of Residential Plume Source Area

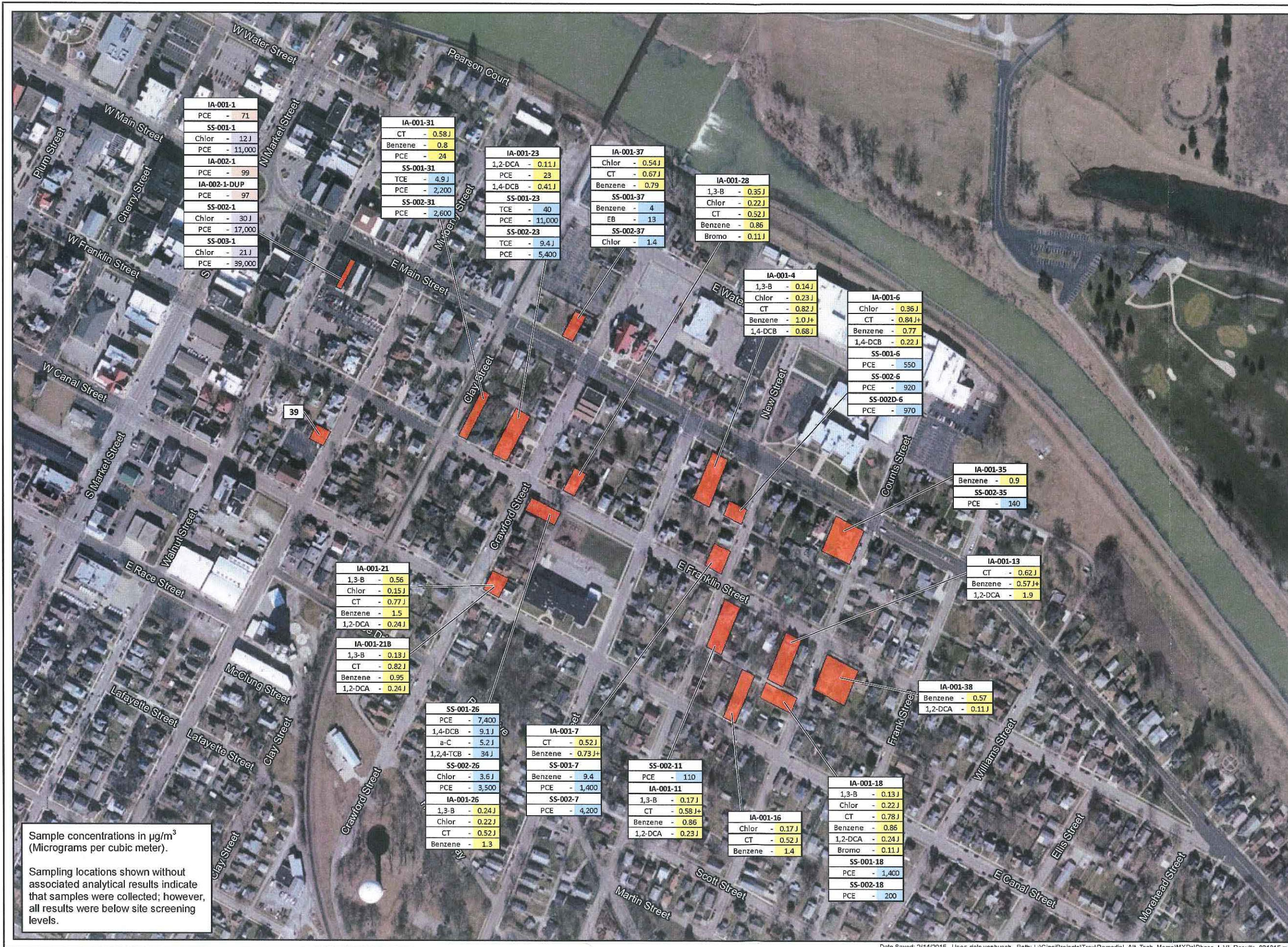



Waterloo Groundwater PCE Profile Along Walnut Street Adjacent to Source Area


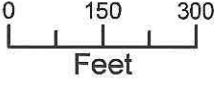
EAST TROY CONTAMINATED
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TROY, OHIO

FIGURE 8
RESIDENTIAL AREA PLUME SOURCE
AREA - PLAN AND PROFILE VIEWS

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Legend
 Vapor Intrusion Monitoring Locations (January 2012)

Exceeds residential indoor air VISL for target hazard quotient of 1 and target risk of 1E-06

Exceeds commercial indoor air VISL for target hazard quotient of 1 and target risk of 1E-06

Exceeds residential sub-slab soil gas VISL for target hazard quotient of 1 and target risk of 1E-06


Exceeds commercial sub-slab soil gas VISL for target hazard quotient of 1 and target risk of 1E-06

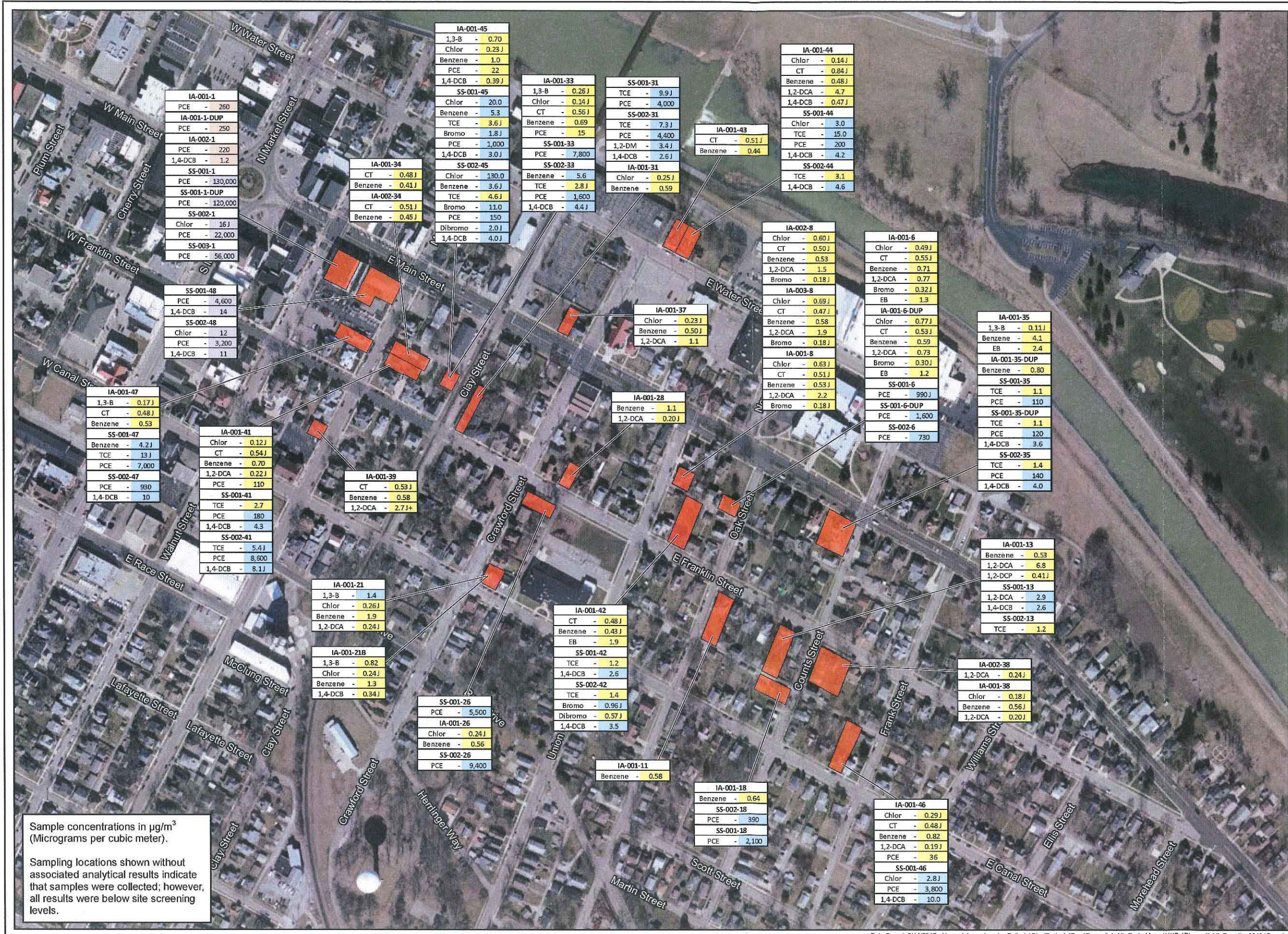
Notes:

1,2-DCA - 1,2-Dichloroethane
1,2,4-TCB - 1,2,4-Trichlorobenzene
1,3-B - 1,3-Butadiene
1,4-DCB - 1,4-Dichlorobenzene
a-C - alpha-Chlorotoluene
Bromo - Bromodichloromethane
cis-1,2-DCE - cis-1,2-Dichloroethene
Chlor - Chloroform
CT - Carbon Tetrachloride
Dibromo - Dibromochloromethane
EB - Ethyl Benzene
IA - Indoor Air Sample
J - Estimated value
J+ - Results estimated, but may be biased high
MCL - Maximum Contaminant Level
PCE - Tetrachloroethene
RSL - Regional Screening Level
SS - Sub-Slab Sample
TCE - Trichloroethene
VISL - Vapor Intrusion Screening Level

**EAST TROY CONTAMINATED
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**FIGURE 9
PHASE I VAPOR INTRUSION
MONITORING RESULTS**





Legend
Vapor Intrusion
Monitoring Locations
(August 2012 and April 2013)

0 150 300
Feet

Exceeds residential indoor air VISL for target hazard quotient of 1 and target risk of 1E-06

Exceeds commercial indoor air VISL for target hazard quotient of 1 and target risk of 1E-06

Exceeds residential sub-slab soil gas VISL for target hazard quotient of 1 and target risk of 1E-06

Exceeds commercial sub-slab soil gas VISL for target hazard quotient of 1 and target risk of 1E-06

Notes:
1,2-DCA - 1,2-Dichloroethane
1,2,4-TCB - 1,2,4-Trichlorobenzene
1,3-B - 1,3-Butadiene
1,4-DCB - 1,4-Dichlorobenzene
a-C - alpha-Chlorotoluene
Bromo - Bromodichloromethane
cis-1,2-DCE - cis-1,2-Dichloroethene
Chlor - Chloroform
CT - Carbon Tetrachloride
Dibromo - Dibromochloromethane
EB - Ethyl Benzene
IA - Indoor Air Sample
J - Estimated value
J+ - Results estimated, but may be biased high
MCL - Maximum Contaminant Level
PCE - Tetrachloroethene
RSL - Regional Screening Level
SS - Sub-Slab Sample
TCE - Trichloroethene
VISL - Vapor Intrusion Screening Level

**EAST TROY CONTAMINATED
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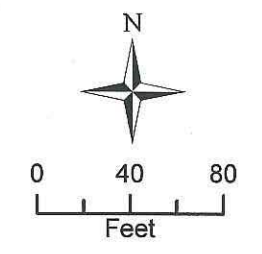
FIGURE 10
**PHASE II VAPOR INTRUSION
MONITORING RESULTS**

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Legend

- ◆ Phase I Soil Sample (May-June 2012)
- ◆ Phase II Soil Sample (February 2013)
- ◆ Phase II Soil Sample (December 2013 and January 2014)
- Exposure Areas

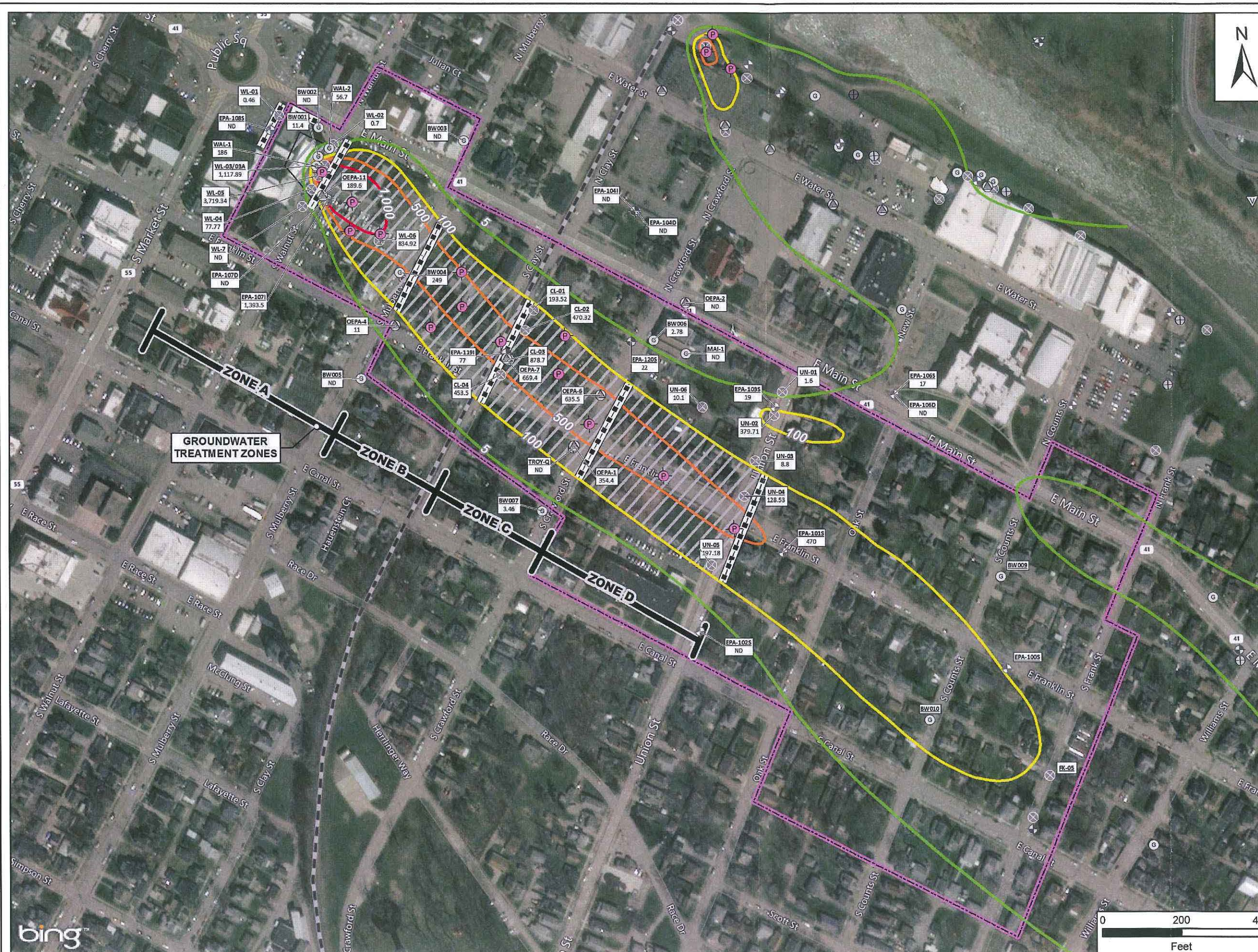


Notes:
 CHE - Cherry Street
 CLY - Clay Street
 CRA - Crawford Street
 FRA - Franklin Street
 HER - Herrlinger Way
 HOB - Hobart
 MAI - Main Street
 MUL - Mulberry Street
 RAC - Race Street
 SB - Soil Boring
 SPN - Spinnaker
 SS - Soil Sample
 STP - St. Patrick Parking Lot
 TPD - Troy Police Department

**EAST TROY CONTAMINATED
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FIGURE 11
 SOIL EXPOSURE AREAS -
 EAST WATER STREET PLUME





Legend

Proposed Performance Monitoring Well

Ohio EPA Well

Phase I RI Well

Phase II RI Well

Troy Monitoring Well

KC Monitoring Well

MCD Well

Geoprobe Location

HRSC Groundwater Profiling

VAS Location

Conceptual Injection and/or Extraction Well Locations

Targeted Treatment Area

Estimated Area for Sub-slab Depressurization Systems

Total Chlorinated VOCs5 (ppb)1,000 (ppb)500 (ppb)100 (ppb)**Notes:**

Injection, extraction and performance monitoring well locations are conceptual - actual numbers and locations will be determined during the remedial design.

Total concentration is the sum of PCE, TCE, cis-1,2-DCE, and VC.

cis-1,2-DCE - cis-1,2-Dichloroethene

D - Deep

EPA - US Environmental Protection Agency

ETCA - East Troy Contaminated Aquifer

GZA - Spinnaker Site/ Kimberly Clark Monitoring Well

KC - Kimberly Clark

KMW - Spinnaker Site/ Kimberly Clark Monitoring Well

MCD - Miami Conservancy District

MCL - Maximum Contaminant Level

MOR - Morehead Street

ND - Not detected

OEPA - Ohio Environmental Protection Agency

PCE - Tetrachloroethene

ppb - Parts per billion

S - Shallow

T - Miami Conservancy District Monitoring Well

TCE - Trichloroethene

VAS - Vertical Aquifer Sample

VC - Vinyl Chloride

VI - Vapor Intrusion

VOC - Volatile Organic Compound

WAL - Walnut Street

**EAST TROY CONTAMINATED
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FIGURE 13
**GROUNDWATER TREATMENT
ZONES - RESIDENTIAL PLUME
SOURCE AREA**

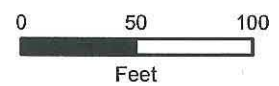




- Legend**
- Phase I Soil Sample (May-June 2012)
 - Phase II Soil Sample (February 2013)
 - Phase II Soil Sample (December 2013 and January 2014)

- Exposure Areas
- Estimated area of soil exceeding PRGs to 15 feet deep
- Estimated area of soil exceeding PRGs to 8 feet deep
- Estimated area of soil exceeding PRGs to 6 feet deep

Notes:
CHE - Cherry Street
CLY - Clay Street
COC - Contaminant of concern
CRA - Crawford Street
FRA - Franklin Street
HER - Herrlinger Way
HOB - Hobart
MAI - Main Street
MUL - Mulberry Street
PRG - Preliminary Remediation Goal based on RAOs for the interim action
RAC - Race Street
RAO - Regional Action Objectives
SB - Soil Boring
SPN - Spinnaker
SS - Soil Sample
STP - St. Patrick Parking Lot
TPD - Troy Police Department

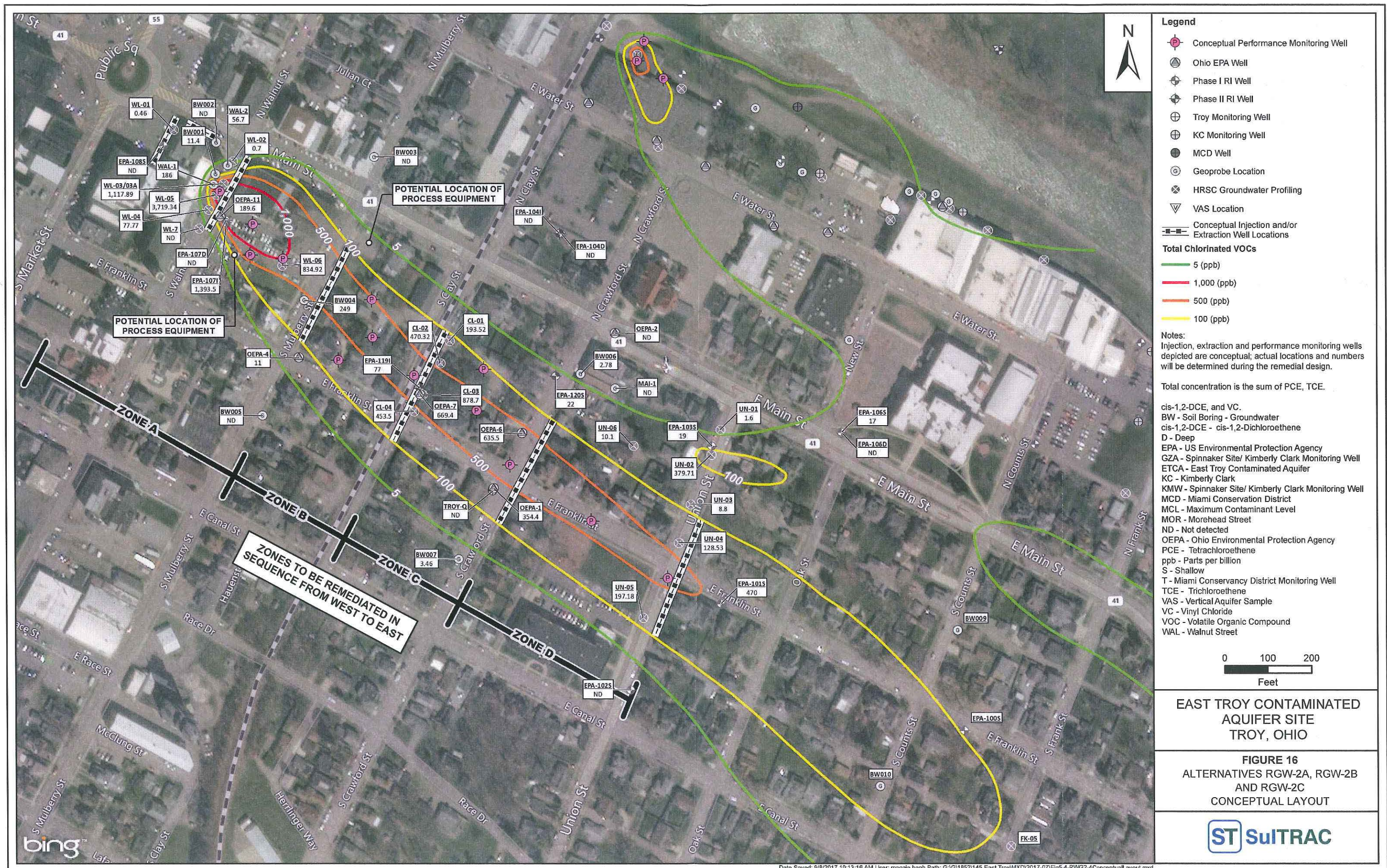


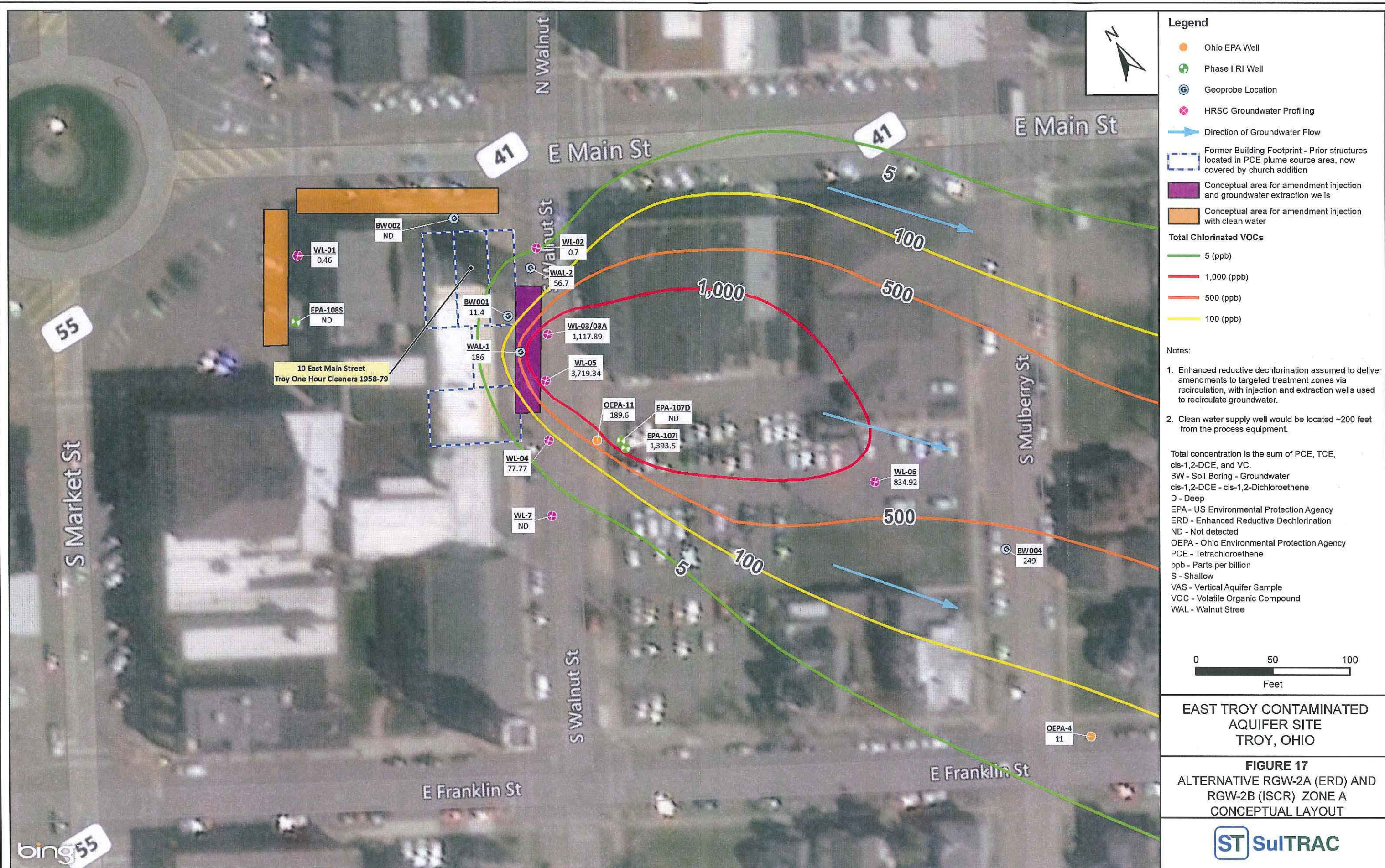
**EAST TROY CONTAMINATED
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**FIGURE 14
SOIL ALTERNATIVE S-2
PROPOSED EXCAVATION AREAS**









Legend

- Ohio EPA Well
- Phase I RI Well
- Geoprobe Location
- HRSC Groundwater Profiling
- Direction of Groundwater Flow
- Former Building Footprint - Prior structures located in PCE plume source area, now covered by church addition
- Conceptual area for amendment injection and groundwater extraction wells
- Conceptual area for amendment injection with clean water
- Total Chlorinated VOCs**
 - 5 (ppb)
 - 1,000 (ppb)
 - 500 (ppb)
 - 100 (ppb)

Notes:

- Enhanced reductive dechlorination assumed to deliver amendments to targeted treatment zones via recirculation, with injection and extraction wells used to recirculate groundwater.
- Clean water supply well would be located ~200 feet from the process equipment.

Total concentration is the sum of PCE, TCE, cis-1,2-DCE, and VC.
BW - Soil Boring - Groundwater
cis-1,2-DCE - cis-1,2-Dichloroethene
D - Deep
EPA - US Environmental Protection Agency
ERD - Enhanced Reductive Dechlorination
ND - Not detected
OEPA - Ohio Environmental Protection Agency
PCE - Tetrachloroethene
ppb - Parts per billion
S - Shallow
VAS - Vertical Aquifer Sample
VOC - Volatile Organic Compound
WAL - Walnut Street

0 50 100
Feet

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FIGURE 17
ALTERNATIVE RGW-2A (ERD) AND
RGW-2B (ISCR) ZONE A
CONCEPTUAL LAYOUT

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